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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/982,617
Filing Date: October 18, 2001
Appellant(s): BOYD ET AL.

Daniel J. Henry
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 01/03/07 appealing from the Office action mailed 07/03/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,678,892	Lavelle et al.	01-2004
5,848,367	Lotocky et al.	12-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 11, 29, 30 and 36 stand rejected under 35 U.S.C. 102(e) as being anticipated by Lavelle et al. (Lavelle) (6,678,892).

As to claim 1, Lavelle discloses a multi-format decoder board for decoding audiovisual data streams in a plurality of encoding formats for use by one or more audiovisual devices (Figs. 1A and 1B), said decoder board comprising:

an interface stage (input/output interfaces; column 3, lines 25-43) for interfacing with a digital data network (bus interconnecting the plurality of devices; column 4, line 66-column 5, line 7 and column 9, line 60-column 10, line 2);

a multi-format decoder (127) for decoding at least two different encoding formats for an audiovisual data stream (column 6, lines 28-42, column 4, lines 16-40 and column 7, lines 8-29);

a microcontroller for controlling said interface stage and said decoder (controlling the system; column 3, lines 25-45); and

connections for connecting said decoder board (input/output interfaces; column 3, lines 25-43) to one or more audiovisual output devices (display, 112 and wireless headphones; column 4, lines 18-20 and lines 20-65).

As to claim 11, Lavelle discloses a multimedia system in a vehicle (Figs. 1A and 1B), comprising:

a digital data network installed in a vehicle (bus interconnecting the plurality of devices; column 4, line 66-column 5, line 7 and column 9, line 60-column 10, line 2);

at least one storage, playback or receiver device on-board said vehicle (column 4, lines 16-30) for providing an encoded audiovisual stream to said digital data network (column 6, lines 28-42);

at least one audiovisual output device connected to said digital data network (display, 112 and wireless headphones; column 4, lines 18-20 and lines 20-65); and

a multi-format decoder board (column 3, lines 25-44) for decoding audiovisual data streams in a plurality of encoding formats (column 4, lines 20-28 and column 6, lines 28-42), said decoder board decoding said audiovisual data stream for use by said at least one audiovisual output device (column 4, lines 18-20 and lines 20-65), wherein said decoder board comprises:

an interface stage (input/output interfaces; column 3, lines 25-43) for interfacing with the digital data network (bus interconnecting the plurality of devices; column 4, line 66-column 5, line 7 and column 9, line 60-column 10, line 2);

a multi-format decoder (127) for decoding at least two different encoding formats for an audiovisual data stream (column 6, lines 28-42, column 4, lines 16-40 and column 7, lines 8-29);

a microcontroller for controlling said interface stage and said decoder (controlling the system; column 3, lines 25-45); and

connections for connecting said decoder board (input/output interfaces; column 3, lines 25-43) to one or more audiovisual output devices (display, 112 and wireless headphones; column 4, lines 18-20 and lines 20-65).

As to claim 29, Lavelle discloses a method of handling a digital data stream carrying data encoded in a plurality of different encoding formats (column 6, lines 28-42, column 4, lines 16-40 and column 7, lines 8-29), said method comprising processing said digital data stream through a decoder board that comprises a multi-format decoder (127) for decoding at least two different encoding formats for an audiovisual data stream (column 6, lines 28-42, column 4, lines 16-40 and column 7, lines 8-29) and output a resulting a decoded audiovisual signal to one or more audiovisual output devices (display, 112 and wireless headphones; column 4, lines 18-20 and lines 20-65).

As to claim 30, Lavelle discloses interfacing said decoder board to a digital data network (bus interconnecting the plurality of devices; column 4, line 66-column 5, line 7 and column 9, line 60-column 10, line 2) with an interface stage (input/output interfaces;

column 3, lines 25-43), said digital data stream coming to said decoder board via said digital data network (Fig. 1A, column 6, lines 9-42).

As to claim 36, Lavelle discloses a multi-format decoder board for decoding audiovisual data streams in a plurality of encoding formats for use by one or more audiovisual devices (Figs. 1A and 1B), said decoder board comprising:

an interface means (input/output interfaces; column 3, lines 25-43) for interfacing with a digital data network (bus interconnecting the plurality of devices; column 4, line 66-column 5, line 7 and column 9, line 60-column 10, line 2);

a multi-format decoder means (127) for decoding at least two different encoding formats for an audiovisual data stream (column 6, lines 28-42, column 4, lines 16-40 and column 7, lines 8-29);

controller means (processor; column 3, lines 25-45) for controlling said interface and said decoder (controlling the system; column 3, lines 25-45); and

output means (input/output interfaces; column 3, lines 25-43) for connecting said decoder board to one or more audiovisual output devices (display, 112 and wireless headphones; column 4, lines 18-20 and lines 20-65).

Claims 2, 12, 31 and 37 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lavelle.

As to claims 2, 12, 31 and 37, while Lavelle discloses an interface stage for interfacing said decoder board with a digital data network, he fails to specifically disclose a fiber optic network.

The examiner takes Official Notice that it was notoriously well known in the art at the time of invention by applicant to utilize fiber optic lines for a network of interconnected devices, for the typical benefits that fiber optic lines provide over traditional connections, including volume and weight reduction; lower cost with higher maintainability; no detectable radiation of RF or other signatures; low susceptibility to disruption or damage by nuclear-induced electromagnetic pulse (EMP); and increased link length and bandwidth.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Lavelle's system to include a fiber optic network for the typical advantages provided by fiber optic lines, including volume and weight reduction; lower cost with higher maintainability; no detectable radiation of RF or other signatures; low susceptibility to disruption or damage by nuclear-induced electromagnetic pulse (EMP); and increased link length and bandwidth.

(10) Response to Argument

a. On page 13, appellant argues that Lavelle does not disclose an interface stage for interfacing with a digital data network.

In response, Lavelle specifically discloses a bus, which can comprise a single wire, which will interconnect a plurality of different devices (170, 172; Figs.

1A and 1B; column 4, line 66-column 5, line 7 and column 9, line 60-column 10, line 2). The interconnection of a plurality of devices is, by definition, a network.

Further, Lavelle specifically discloses wherein the bus will transmit digital data signals, as the output from the plurality of digital sources (Fig. 1A; column 4, lines 16-40) is transmitted across the bus to the signal processing/conversion facilities (column 6, lines 9-42). Thus, as digital data signals are clearly transmitted across the bus network to be decoded and subject to *digital to analog conversion,* the data bus is clearly disclosed as being a digital data network. Thus appellant's arguments in regards to the presence of a digital data network are not convincing.

Finally, Lavelle clearly discloses wherein the system comprises "input/output interfaces" (column 3, lines 25-43) and wherein the system "interfaces" with the digital data network (as all of the devices connect with the bus; see Figs. 1A-1B). As all of the different input/output devices interface with the digital data network (see Fig. 1A), this clearly meets the claim limitation of "an interface stage for interfacing with a digital data network", as the data signals must pass through an interface to reach the digital data bus from the various inputs/outputs. As seen in appellant's own specification at page 9, lines 14-19, the "interface stage" is simply disclosed as the interface allowing connection between the decoder circuitry and the network. As Lavelle's decoder circuitry and network are clearly disclosed as being connected, as signals are clearly transmitted to/from the decoder across the network, the "input/output interfaces"

disclosed by Lavelle clearly read upon the claim limitations. Therefore, appellant's arguments are not convincing.

b. On pages 14-15, appellant argues that Lavelle does not disclose a digital data network.

As indicated above, Lavelle specifically discloses wherein the bus will transmit digital data signals, as the bus is receiving signals from a plurality of digital sources (Fig. 1A; column 4, lines 16-40). As the decoding and digital to analog conversion of the received digital signals is performed at the signal processing/conversion facilities (column 6, lines 9-42), the bus is clearly transmitting digital data signals, and thus clearly reads upon a "digital data network". Appellant's reasoning as to why the bus would only transmit analog signals completely contradicts Lavelle's disclosed system, as it clearly shown that digital signals must be transmitted across the bus. For example, a DVD and a CD (which are some of the sources disclosed by Lavelle; Fig. 1A and column 4, lines 16-40) are *digital* storage devices for storing *digital* data. This data would then have to be decoded and converted to analog to be used in a typical analog television or radio. In this case, however, Lavelle specifically states that the decoding for the various input sources would be performed at signal processing facilities, 127 (column 6, lines 9-42), which is connected to the input sources *via the bus* (see Fig. 1A). Thus, the most basic premise of Lavelle's system involves

the transmission of digital data across the bus, which then clearly qualifies as a digital data network, and is not limited to analog as appellant suggests.

c. On pages 15-16, appellant argues that Lavelle does not disclose a "microcontroller for controlling said interface stage and said decoder". More specifically, appellant states the Lavelle merely discloses that the invention may "include a CPU".

In response, Lavelle specifically discloses wherein the system may be implemented on a computer platform including a CPU, RAM and an operating system which controls the execution of the system (column 3, lines 26-41). Thus, Lavelle clearly disclose more then the mere inclusion of a CPU, as the system is embodied as a *computer*, with an operating system running in memory and on the CPU, which is *controlling the execution of the system* (column 3, lines 38-41). As the operating system (running on the CPU) is controlling the execution of the different system applications, the execution of the individual elements of the system are under the control of the computer operating system. This could clearly include such elements as the "interface stage" and "digital data network". Thus appellant's arguments are not convincing.

d. In regards to appellant's arguments on page 16, in regards to the "digital data stream" of claim 29, please see (b) above in regards to the clear use of a digital data network in Lavelle's system, as Lavelle clearly discloses the

transmission of digital data streams across the digital data network, and is not limited to analog as appellant suggests.

e. In regards to appellant's arguments on page 17, in regards to the "digital data stream" and "interface stage" of claim 30, please see (a) and (b) above in regards to the clear use of a digital data network and an interface stage in Lavelle's system.

f. In regards to appellant's arguments on pages 17-18, in regards to claims 2, 12, 31 and 37, it is noted that, as indicated above, Lavelle clearly discloses an interface stage for interfacing said decoder board with a digital data network.

Although Lavelle discloses wherein one of ordinary skill in the art could utilize a variety of different implementations for the data bus (column 9, line 60-column 10, line 2), he fails to specifically disclose fiber optic.

As indicated in the previous actions, the particular use of fiber optic cables for the implementation of a data network is notoriously well known to those of ordinary skill in the art, as fiber optic cables provide numerous benefits over more traditional connections. These include higher bandwidth, lower weight and the reduction of RF noise, all of which would be pertinent and desirable in the implementation of the particular system disclosed by Lavelle.

Furthermore, appellant was further provided with the Lotocky patent which clearly demonstrates that it was known at the time of invention to utilize a fiber optic network (see Fig. 1-2; column 4, lines 6-26) to distribute audio and video within a vehicle (column 3, lines 24-55). The supposed differences indicated by appellant merely reflect the size of the particular vehicle. The mere fact that Lotocky vehicle distribution system includes more passengers does not alter the clear use of fiber optic networks for distribution within a vehicle. The benefits therein, were further known to those of skill in the art, as fiber optic connections eliminate RF radiation and have higher bandwidth while reducing the transported weight, all of which would motivate one to utilize a fiber optic network within Lavelle's system.

In particular regard to "interfacing said decoder board with a fiber optic network", it is noted that as indicated above, Lavelle discloses the use of an interface stage for interfacing the decoder board with the digital data network. Lavelle further discloses wherein a plurality of different bus architectures, and thus corresponding interfaces to allow communication with the particular bus, may be utilized (column 9, line 60-column 10, line 2). Thus, the modification of Lavelle to utilize known fiber optic network, and a corresponding interface to allow communication with the fiber optics, would have clearly been within the skill and knowledge of one of ordinary skill in the art.

g. In regards to the "lack of motivation" to modify Lavelle, it is once again noted that the many known benefits of fiber optics, such increased bandwidth, reduced weight and the elimination of RF radiation would clearly motivate one to include a fiber optic network within Lavelle. Appellant's arguments in regards to the "small size" of Lavelle's system are not persuasive, as these specific benefits are related to the size of the network. The fact that a larger network may gain corresponding *larger* benefits, as more fiber optic cable would be used as opposed to coax or other types, this does not preclude the fact that a "small" network would still clearly gain benefit from the use of fiber optic. Thus, appellant's arguments are not convincing

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

JS

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